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C.1 INTRODUCTION

The overall vision for the INEL AMWTP is to treat waste for final disposal by a process which provides the greatest value to the Government. This shall be accomplished through a private sector treatment facility that has the capability to treat specified INEL waste streams, with flexibility to treat other INEL and DOE regional and national waste streams. The services shall: (1) treat waste to meet the requirements specified herein; (2) reduce waste volume and life-cycle cost to DOE; and (3) be performed in a safe and environmentally compliant manner.

The primary wastes involved in this effort are DOE laboratory and processing wastes from Rocky Flats and various DOE facilities. These wastes are currently stored in drums, boxes, and bins at the INEL TSA. The wastes are anticipated to consist of heterogeneous mixtures of various solid materials including paper, cloth, plastic, rubber, glass, graphite, bricks, concrete, metals, nitrate salts, process sludges, miscellaneous components, and some absorbed liquids.

Most of the waste (95%) is believed to contain both RCRA hazardous waste constituents and radioactivity, hence classifying it as a "mixed waste." Some wastes may also contain TSCA regulated materials such as PCBs and asbestos. In addition, the waste is broken down into two categories, based upon the level of radioactivity. The first is classified as low-level waste which contains alpha-emitting radionuclides with an atomic number greater than 92 and half-lives greater than 20 years, at concentrations between 10 - 100 nCi/g, referred to as alpha low-level mixed waste (ALLMW). The other category is referred to as transuranic (TRU) waste. Waste in this classification contains alpha-emitting radionuclides with an atomic number greater than 92 and half-lives greater than 20 years, at concentrations greater than 100 nCi/g. Currently the INEL has the majority of DOE's stored ALLMW and TRU waste. The volume of waste is estimated at 25,000 m^3 of ALLMW and 40,000 m^3 of TRU waste.

The documents listed below contain information relating to the wastes to be treated under this contract. These documents are provided as reference material only. The Contractor is expected to have reviewed these materials, and to have used its own expertise to independently evaluate the information contained in these materials. Copies of the documents were made available to the Contractor and will be provided to the Contractor on execution of the contract.

a. Waste Description Information for Transuranic Contaminated Wastes Stored at the INEL (Dec. 1995)

b. Appendix A Detailed Information for Mixed and Non-mixed Alpha Low Level Waste (Dec. 1995)

c. Appendix B, Detailed Information for Mixed and Non-mixed Transuranic Waste (Dec. 1995)

d. Characterization Information on Additional INEL and Offsite Transuranic Contaminated and Mixed Low-Level Waste Potentially Available for Treatment by the Advanced Mixed Waste Treatment Project (Sept. 1995)

e. INEL Site Treatment Plan (Oct. 1995)

In addition to the waste identified in the above documents, other potential waste to be treated may include contaminated soil, contaminated plywood and plastic, DOE environmental restoration and D&D wastes. Subject to the AMWTP Waste Acceptance Criteria, the Government can provide any combination of the above described wastes (including makeup for the 3100 m^3 shipped prior to 2003) to be treated under this contract up to a total of 65,000 m^3 prior to exercising its option under Clause B.3, **Pricing Schedule.** The 65,000 m^3 shall contain no more than 4100 kg of elemental mercury. The AMWTP Waste Acceptance Criteria is incorporated into this contract as Section J, Appendix O.

C.2 DESCRIPTION OF SERVICES

Services under this Statement of Work shall be provided in three phases:

Phase I consists of successful completion of all preliminary permitting steps, including the AMWTP ES&H Authorization Process; completion of the steps necessary to obtain permits and licenses, if applicable; technology verification as required; submission to DOE of data to support NEPA analysis; and public involvement activities. The Contractor shall obtain its own Environmental Protection Agency Identification number and shall sign all of its own permits as owner and operator except as directed otherwise by the authority having jurisdiction or as otherwise required by law or regulation. The Government shall be responsible for delays and associated impacts should the State of Idaho decide that the Idaho Hazardous Waste Facility Siting Act applies to the AMWTP. During Phase 1, the Contractor and DOE in cooperation will initiate identification of other INEL and DOE non-INEL wastes for treatment, obtaining treatment concurrence with generator sites and regulatory

authorities, and development of a treatment schedule for these wastes. The completion of Phase I is defined as receipt of all contract deliverables specified herein and receipt of all environmental permits or approvals required to proceed with construction of the facility and/or modifications to the facility. Some activities begin in Phase I but continue into Phases II & III; the continuation of those activities shall be included in the scope of those phases.

Phase II consists of the construction of a new facility and/or modification of an existing facility, systems operational testing, and any testing required in accordance with the AMWTP ES&H Program Operating Plan and as part of any ongoing obligations in preliminary permits. Phase II also includes the successful completion of all final permits, licenses, requirements and any other obligations established during the AMWTP ES&H Authorization process necessary in order to begin facility operation.

Phase III consists of retrieval of the waste from RWMC; transportation of waste between the RWMC and the Contractor's facility; pre-treatment characterization of waste necessary for storage and/or treatment; storage; treatment; post-treatment characterization as necessary to certify the final waste form; preparation of the waste for shipment; loading of TRUPACT II containers or other approved transport carriers; loading of containers on approved transport carriers, and RCRA closure and D&D of the facility (including GFE facilities). The location of the Contractor's treatment facility shall be on the INEL, but the Contractor may choose to treat some categories of waste at another location in accordance with all applicable laws and regulations subject to DOE approval. Transportation of DOE waste to WIPP or other TRU storage/disposal facility is the responsibility of DOE. Waste shall be treated to meet the requirements specified herein. Transportation of MLLW and LLW to offsite disposal locations is the responsibility of the Contractor. Final disposal of the process-generated waste shall be the responsibility of the Contractor. TRU waste and LLW generated from closure and D&D activities of Contractor's facilities (including GFE) that is characterized and packaged to WIPP WAC, Rev. 5 or RR WAC, Rev. 5 criteria, respectively will be accepted by the Government for disposal. The WIPP WAC, Rev. 5 and RR WAC, Rev. 5 are incorporated into the contract by reference. Copies will be furnished to the contractor upon execution of the contract.

The definitions of "D and D" and "closure" as utilized in this contract are stated in Section J, Appendix B.

A compliant and effective ES&H program is required for all phases of the project.

GFE and utilities available to support the services requested are identified in Section J Appendix C.

C.3 SCHEDULE

Phase I shall be completed no later than three years from the date of contract award. Construction of the facility shall be completed no later than December 31, 2002. Facility operation shall begin no later than March 31, 2003. The Contractor's overall schedule must support the shipment of the waste resulting from treatment of 65,000 m^3 of waste out of the State of Idaho by a target date of December 2015 and a deadline of December 2018. After January 1, 2003 a running average of no fewer than 2000 m^3 of waste (pre-treatment volume) shall be shipped out (in the case of disposal at a commercial facility) or made available to DOE for shipment out of the State of Idaho per calendar year. Running average means the total volume of wastes shipped over any three-year period divided by 3. Authorization to commence Phase II shall be provided by DOE to the Contractor not later than 120 days prior to the Contractor's scheduled Phase II start date, as defined in the Program Management Plan.

The decision to commence Phase III shall be based upon the successful completion of system-operational testing (see definition in Section J Appendix B), the Readiness to Operate Report, other provisions of the AMWTP ES&H Program Operating Plan, and any testing necessary to satisfy environmental permit requirements. Phase III shall not begin until specific authorization is received from DOE. D&D of the facility and GFE shall be completed no later than 2 years after RCRA closure of the facility and GFE.

Detailed schedules provided in the Contractor's Project Management Plan will be incorporated into Section F of this contract and shall serve as the project baseline. The schedules provided in the Project Management Plan shall be consistent with those presented in the best and final offer. The Contractor shall not be responsible for Government caused delays to the baseline schedules.

C.4 RETRIEVAL

Approximately 11,700 m^3 of waste are available from above ground storage facilities. A structure has been constructed over the remaining 53,300 m^3 of waste currently stored under the earthen covered berm. This structure, the Transuranic Storage Area/Retrieval Enclosure, is available for use by the Contractor to perform retrieval operations. The Contractor shall be responsible for retrieving waste at a rate that meets or exceeds the requirements described in Section C.3, Schedule. Retrieval refers to the recovery of INEL stored waste from the earthen covered berms located within the Transuranic Storage Area/Retrieval Enclosure, the RCRA Type I and II storage modules, the Certified and Segregated (Waste) Storage Building, the Intermediate Level Transuranic Storage Facility, and the Air Support Building at the RWMC.

(Wastes that are currently stored in the Certified and Segregated Storage Building and Air Support Building will be transferred by DOE to storage modules by 12/1/97.) All operations shall be conducted in accordance the AMWTP ES&H Program Operating Plan.

In accordance with Section H, Clause H.36, the Contractor must decontaminate the retrieval facility and any GFE to 20 dpm alpha and 1000 dpm beta gamma per 100 square centimeters smearable contamination above background for radiation levels and in accordance with the RCRA Closure plan, including any decontamination of the top surface of the asphalt pads on which the waste is currently stored. Remediation of contamination of the pad below the surface or contamination of the dirt under the pad is not within the scope of this contract.

The baseline of the total containers that will require venting is 25%. The baseline amount of breached containers is 1% of each container type (drum, box, bin) per year.

There are approximately 40,000 m^3 of soil in and around the waste in the earthen covered berm. Soil cover removed from the bermed waste shall be dispositioned based on results of characterization. (For all characterization, radiological contamination is considered to be "above background" levels). Based on the commingled chemical and radiological constituents of the TSA waste, and the high sensitivity of radiation monitoring instruments, an initial assumption will be that if no radiological contamination is detected, there is no chemical contamination present. During Phase I, DOE and the Contractor shall mutually agree on a method to determine a discrete value for "background level" to be used the baseline for Phases II and III. Soil which is radiologically clean and does not contain RCRA hazardous constituents may be free released and dispositioned at a location on the INEL which is agreed upon with DOE. Soil which is contaminated with RCRA hazardous constituents but does not contain radiological contamination shall be treated and disposed of dispositioned as a hazardous waste. Soil which contains radiological contamination less than or equal to 10 nCi/g transuranic elements, but does not contain RCRA hazardous constituents, shall be dispositioned as low level waste (disposal at the RWMC is an option). Disposal costs at RWMC or other DOE sites will be borne by DOE. Soil which contains radiological contamination above 10 nCi/g transuranic elements shall be segregated and treated. Soil which is radiologically contaminated and contains RCRA hazardous constituents shall be segregated and treated. Localized contamination encountered beneath the stored waste shall be addressed through the D&D and RCRA closure plans.

The baseline amount of soil to be considered as TRU/ALLMW requiring treatment during Phase III is 2000 m^3 and shall be considered as part of the basic 65,000 m^3 of waste (partial make-up for the 3100 m^3 of waste that will be shipped by DOE prior to

startup of the treatment facility). The baseline amounts of soil considered to be hazardous and low-level waste are 1,000 m^3 and 2,000 m^3 respectively.

Early retrieval (prior to January, 2003) will require an agreement between the Contractor and DOE to define how retrieval operations will be coordinated with activities associated with shipments to WIPP prior to 2003. The Contractor shall seek the agreement as soon as possible but no later than 1 year prior to start of expected retrieval.

C.5 CHARACTERIZATION

The Contractor shall perform all pre-treatment characterization for INEL waste to be transported and for all wastes to be treated or stored . This includes all wastes described in Section C.1, Introduction, up to a maximum of 65,000 m^3. Acceptance of waste under Clause B.3, Pricing Schedule, Option 2 will be in accordance with the AMWTP Waste Acceptance Criteria which may include provisions for pre-treatment characterization by offsite generators; however, the Contractor shall provide for verification of offsite characterization. The Contractor shall also perform all post-treatment characterization and certify the waste meets all requirements. All INEL waste which cannot be treated (as defined by the AMWTP WAC) shall be characterized as required by the INEL RWMC RCRA Part B permit for storage and/or to meet the WIPP WAC, Rev. 5, requirements, or other mutually agreed upon disposal requirements. All offsite waste which cannot be treated (as defined by the AMWTP WAC) shall be made available for return to the generator as soon as transportation details can be arranged. The uncharacterized waste in the INEL inventory shall not contain additional waste codes or shall be similar to the distribution of the characterized waste and shall not be significantly different in physical characteristics to the characterized waste as defined in the references in C.1.

C.6 STORAGE

The Contractor shall be responsible for the safe and compliant storage of all wastes, both pre- and post- treatment, until transported offsite (returned to generator or disposed of), or until contract completion except as provided for in Section C.8, Packaging and Transportation.

C.7 TREATMENT SERVICES/PRODUCT WASTE FORM

Services provided shall maximize the treatment of the 65,000 m^3 of identified waste, and achieve a minimum volume reduction of 65% (volume reduction is defined in Section J, Appendix B). The INEL may have up to 3,100 m^3 which will not require treatment and will be shipped to WIPP prior to startup of the AMWTP facility. This volume will be replaced by other similar wastes (including contaminated soil) meeting the AMWTP Waste Acceptance Criteria to reach the total of 65,000 m^3.

The Contractor shall minimize the amount of treated waste that is classified as non-TRU waste. Wastes such as bulk metals that can be decontaminated and disposed will count as having undergone acceptable treatment. All treated waste shall be segregated by the Contractor into waste greater than or equal to 100 nCi/g and waste less than 100 nCi/g. Treated waste greater than or equal to 100 nCi/g shall meet minimum requirements of WIPP WAC, Rev. 5, and RCRA LDR and TSCA requirements in effect as of 8/1/96. Treated waste less than 100 nCi/g shall meet RCRA LDR requirements and TSCA requirements in effect as of 8/1/96. The Contractor shall provide certification that the waste has been treated to these requirements. Process generated wastes as defined in Section J, Appendix B shall be the responsibility of the Contractor and must be disposed of in accordance with all applicable regulations. All RCRA hazardous waste newly generated by the Contractor in performing its waste treatment obligations under this contract, except for the treated waste, shall be the responsibility of the Contractor and must be disposed of in accordance with all applicable regulations. DOE will incur disposal cost of secondary waste at DOE sites. DOE waste disposal capabilities will continue to be available. Except as provided in Section C.6, title to and responsibility for all radioactive waste delivered for treatment or treated by the Contractor shall remain with Government.

The Contractor shall establish management controls for verification of volume input and output to the treatment facility. The system shall track material flows sufficiently to provide the supporting information for invoices for payment and to establish conformance to the contract. DOE retains the right to audit this system and independently verify all incoming and outgoing waste volumes. Any such audit shall be conducted upon reasonable prior notice and in such a manner as not to unreasonably interfere with the Contractor's operation of the facility.

C.8 PACKAGING AND TRANSPORTATION

The Contractor is responsible for transfer of the pre-treated waste containers and the waste product containers between the treatment facility and the RWMC, and for the packaging and loading of the treated waste form for transport off-site. If the

Contractor elects to treat, recycle or dispose of a category of waste at a commercial facility, the Contractor is responsible for the packaging and transportation of that waste.

Packaging and transportation shall meet all Federal and state regulatory requirements and be consistent with the Contractor's approach to on-site or off-site treatment. Waste can be transported from the TSA to the AMWTP without further treatment to meet DOT requirements.

The TRU final waste form shall be packaged in containers which can be shipped in the TRUPACT II shipping container (NRC certificate of compliance #USA/9218/B(U)F) or other DOT-approved transport containers. These specifications are identified in the WIPP WAC, Rev. 5. Non-TRU final waste forms shall be packaged in DOT approved containers.

The upper bounds for the number of shipments will be set by WIPP or the approved geologic repository. Current DOE projections, from WIPP studies, suggest that no more than 47 trucks per week could be accepted throughout the DOE complex beginning in 2002. Shipping rates at another repository could vary depending upon conditions at that repository. Note that the current INEL shipping rate with the one TRUPACT loading dock will support loading of 180 transporters per year (2 shift TRUPACT loading dock operations). The Contractor must optimize the treatment and loading schedule to meet terms of this contract. If over 180 transporters per year will be required due to the Contractor's volume, weight and diversity of the Contractor's final waste form, the Contractor must construct an additional loading dock(s), or otherwise assure that loading efforts will support preparation of waste for final shipment to the repository within these bounding limits. The final shipping schedule and number of shipments must be agreed to by DOE. The Government shall provide transportation to WIPP or other TRU storage/disposal facility such that the onsite storage capacity is not exceeded and that the Contractor's performance under this contract is not delayed or impacted.

Any non-RWMC waste to be treated will be delivered to the RWMC by the generator.

C.9 ENVIRONMENTAL, SAFETY AND HEALTH CONSIDERATIONS

The Contractor shall maintain compliant and safe operations, integrate safety and health into all activities, identify hazards and manage risks, and perform self-evaluations of its ES&H program in accordance with the terms of this contract and its AMWTP ES&H Program Operating Plan. The Contractor shall comply with applicable Federal, state, and local ES&H laws, codes, orders, and regulations in effect

as of 8/1/96 and shall plan its compliance in a streamlined manner that eliminates redundant, unduly burdensome and unnecessary compliance activities. The Contractor shall also comply with applicable portions of the EPA Proposed Rule, "Revised Standards for Hazardous Waste Combustors" 61 FR 17358, April 19, 1996 which is hereby incorporated into this contract by reference, as a requirement.

AMWTP ES&H Authorization Process: Under the Atomic Energy Act, DOE-ID is the responsible agency with regulatory authority for INEL operations for radioactive/nuclear materials and for on-site worker safety and health. DOE-ID will exercise this responsibility through the AMWTP ES&H Authorization Process described in Appendix D of Section J of this Contract.

For compliance with DOE Orders and Directives, the Contractor shall obtain a formal AMWTP ES&H Authorization, as part of Phase I, in accordance with the AMWTP ES&H Authorization Process, Appendix D of Section J. The resulting AMWTP ES&H Program Operating Plan will define the baseline ES&H requirements and will be incorporated into the contract. Any changes shall be negotiated in advance between the Contractor and DOE-ID. ES&H information contained in other formal permits (such as the State RCRA Permit) and/or licenses (if applicable) need not be duplicated in the AMWTP ES&H Authorization, but will be assumed to be included in the baseline ES&H requirements.

Direct interface with the DNFSB is the responsibility of DOE. The Contractor shall cooperate with DOE to allow inspection of the AMWTP facility by the DNFSB. If the DNFSB should have findings related to the safety of the facility or operation, DOE will determine whether the findings identify non-conformance with the AMWTP ES&H Program Operating Plan.

C.10 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

During Phase I of this contract, the Contractor shall furnish environmental data as requested by DOE to support an Environmental Impact Statement (EIS). The EIS is expected to be tiered, and prepared and completed according to the newly revised DOE NEPA regulations and policy, including the time frames set out in these changed regulations and policy. The Contractor shall not be responsible for schedule delays associated with the NEPA process to the extent they are caused by DOE or third parties. DOE shall issue a record of decision prior to the start of Phase II as specified in the Contractor's approved Project Management Plan.

C.11 HISTORIC PROPERTIES AND CULTURAL RESOURCES

The Contractor shall be responsible for all historic properties and cultural resources protection within the physical boundaries of its treatment facility site to the extent required by applicable law. The Contractor shall establish a program that meets all Federal, state, and local historic and cultural resource preservation requirements. The Contractor shall be responsible for all historic properties and cultural resource notifications to all state, local, and tribal contacts, as required. Upon treatment facility site selection, DOE shall notify the Contractor of any historic properties or cultural resources related to the selected site known to DOE and DOE shall cooperate in protecting all such properties and resources. The Contractor shall provide DOE with all historic property and cultural resource documentation, notices and permits in its possession.

C.12 QUALITY

The Contractor shall establish, and integrate into all operations, a quality program that meets all applicable Federal, state, and local requirements including, but not limited to, 10 CFR 830.120 and the "Transuranic Waste Characterization Quality Assurance Program Plan" dated April 30, 1995.

(CONTINUED ON NEXT PAGE)

C.13 DELIVERABLES

(Submit 1 copy of each to the Contracting Officer listed under Clause G.5 and 4 copies of each to the COR designated under Clause G.4.) For documents requiring DOE review and approval, written comments will be provided by DOE within 30 days (90 days for ES&H Program Operating Plan, FSAR and SO Test Plan). Approval will be within 10 days of resolution of comments and re-submittal. Submittal schedules and review and approval cycle periods are the initial baselines and subject to negotiation through the ES&H Authorization process and/or the approved Project Management Plan.

Phase I	Submittal Schedule	DOE Action	Acceptance Criteria
Public Involvement Plan	As updated	Information	---
Project Management Plan	3 months after contract award	Review and Approval	Best management practices/ compliance with contract requirements
Siting Plan and Study	6 months after contract award	Review and Approval	Sufficient data to perform NEPA analysis
Copies of permit and license applications and related correspondence	No later than 12 months from date of contract award	Information for non-DOE permits except permits where DOE will sign as owner; then DOE will review and comment	---
Copies of the AMWTP ES&H Program Operating Plan and Requirements Document	No later than 12 months from date of contract award	Review and Approval	As determined through ES&H Authorization Process

Copies of approved preliminary or final permits and licenses	As specified in Permitting Plan	Information	---
Results Report (summary of technology verification studies and proposed changes)	As required by H.40 and prior to any changes in proposed process	Review and Approval	Compliance with negotiated contract requirements
Preliminary Safety Analysis Report	As specified in Project Management Plan	Review and Approval	As determined through ES&H Authorization Process
Data (updated from proposal submission) to support NEPA analysis	No later than 12 months from date of contract award	Review and Approval	Compliance with negotiated contract requirements
Draft closure plans/other documents related transfer of RCRA permits for GFE	30 days prior to submittal to the State	Review and comment	As required by the State

Phase II	Submittal Schedule	DOE Action	Acceptance Criteria
Updated Project Management Plan	2 months after completion of Phase I	Review and Approval	Compliance with permit/contract requirements
SO Testing Plan	4 months prior to SO testing	Review and Approval	As determined through ES&H Authorization Process

All Permitting Test Plans	4 months prior to SO testing or concurrent with permit applications	Information	---
SO Testing Results Report	45 days prior to start of operations	Review and Approval	Compliance with SO Testing Plan
Final Safety Analysis Report	6 months prior to start of operations but no later than July 1, 2002	Review and Approval	As determined through ES&H Authorization Process
Quality Assurance Program Plan	6 months prior to start of operations	Information	---
Quality Assurance Project Plan	6 months prior to start of operations	Review and Approval	Compliance with WIPP QA and RCRA permit requirements
Final WAC Document for Contractor's Facility	5 months prior to start of operations but no later than August 1, 2002	Review and Approval	Compliance with negotiated contract requirements
Readiness to Operate Report	45 days prior to start of operations	Review and Approval	As determined through ES&H Authorization Process

Phase III	Submittal Schedule	DOE Action	Acceptance Criteria
Waste Form Certification	As specified in Project Management Plan	Review and Approval	Compliance with permit/WIPP requirements
Treated Waste Disposition	As specified in Project Management Plan	Review and Acceptance	Per Statement of Work
Soil Disposition	As specified in Project Management Plan	Review and Acceptance	Per Statement of Work
D&D Plan	As specified in Project Management Plan	Review and Approval	As determined through ES&H Authorization Process